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5                   ABSTRACT OF DISCLOSURE

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7       An instrument provides a quantitative measurement of an  
8 analyte in a gas. It includes a detection cell that provides an indication  
9 of an amount of analyte present in the gas, and a valve having a closed  
10 position, a sample gas position, and a calibration gas position. There is  
11 a calibration gas inlet orifice in communication with a gas outlet  
12 through a first flow path including the valve and the detection cell, and  
13 a sample gas inlet orifice in communication with the gas outlet through  
14 a second flow path including a scrubber, the valve, and the detection  
15 cell. Two orifices of different sizes, a sample gas orifice along the  
16 second flow path, and a bypass orifice positioned between the sample  
17 gas orifice and the gas outlet, prevent a build up of excessive pressure  
18 in the instrument when the valve is in the closed position or the  
19 calibration gas position.

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